Seagate® Enterprise Storage Manager Software

Installation Guide

NWD6203
NWD6301
XP6209
XP6210
XP6302
XP6500

100765771, Rev. A
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Revision History

Revision	Date	Description of Changes
Rev. A	August 2015	Initial release of the document.

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Contents

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Enterprise Storage Manager Software Installation Guide

The Seagate® Enterprise Storage Manager software is a web-based application that provides monitoring and management functions for the Seagate Nytro Application Acceleration products. This document describes the steps to install the Enterprise Storage Manager software and the configurable parameters for the software installer.

1 Hardware and Software Requirements

The following list provides the hardware and software requirements for the Enterprise Storage Manager software:

Table 1 Hardware and Software Requirements

REQUIREMENT	DESCRIPTION
Processor	x86 ■ Intel® Pentium 4 or AMD® Athlon Dual Core, 3.0 GHz or higher. x64 ■ AMD Athlon 64 ■ AMD Opteron™ ■ Intel Pentium 4 ■ Intel Xeon®
Memory	2-GB RAM
Display Resolution	1024 x 768 with True Color **NOTE** *True Color* is an optional requirement. It is suggested for better resolution.
Hard Disk	x86 ■ 150 MB for installation x64 ■ 150 MB for installation **NOTE** The server requires 200 MB of free space.
Pointing Device	Microsoft® Mouse Compliant

Table 1 Hardware and Software Requirements (Continued)

REQUIREMENT	DESCRIPTION
Supported Operating Systems	x64 ■ Windows® — Windows Server® 2012 R2 — Windows 7 SP1 — Windows 8 ■ Red Hat® Enterprise Linux® 6.5 and 7.0 ■ CentOS™ 6.5 and 7.0 ■ VMware® ESXi 5.5
Supported Web Browsers	■ Windows Internet Explorer® 9.0 and later ■ Google Chrome™ 16.0 and later ■ Mozilla® Firefox® 9.0 and later ■ Safari® 5.0 and later
Supported Devices	■ NWD6203 ■ NWD6301 ■ XP6209 (2TB only) ■ XP6210 ■ XP6302 (1.5 TB, 2 TB, and 4TB) ■ XP6500
OpenSLP 2.0.0	■ OpenSLP is not included with the operating system installation package. To downloaded OpenSLP, visit: http://www.openslp.org/download.html

2 Installation Prerequisites

The Enterprise Storage Manager software uses OpenSLP 2.0.0 to discover the existence and location of the Enterprise Storage Manager software service. The Enterprise Storage Manager management host (with a management host or by a managed host) uses OpenSLP to discover hosts that run the Enterprise Storage Manager software. In order for the hosts that run on the Enterprise Storage Manager software to be discovered, install OpenSLP 2.0.0.

NOTE If you install OpenSLP after the Enterprise Storage Manager software installation, you must restart the Enterprise Storage Manager software Service for the Enterprise Storage Manager software to be discovered. Refer to the *Seagate® Enterprise Storage Manager Software User Guide*.

2.1 Prerequisites for the Windows Operating System

Following are the prerequisites for the Windows operating system:

- Microsoft Visual C++ 2008 Redistributable Package
- For the Windows operating system, you can use OpenSLP 2.0.0, but it is not mandatory. In the absence of OpenSLP, the Enterprise Storage Manager software runs without discovering other hosts in the Enterprise mode or runs without being discovered in the Standalone mode. For more information on the installation modes, see Section 3.1, Installation Modes.

2.2 Prerequisites for the Linux Operating System

Following are the prerequisites for the Linux operating system:

- **OpenLDAP** – Use the following command:
  ```
  yum install openldap
  ```
- **OpenSLP** – Use the following command:
  ```
  yum install openslp
  ```
- **Sysfsutil** – Use the following command:
  ```
  yum install libsysfs
  ```

3 Installing the Enterprise Storage Manager Software

This section describes the installation modes and the steps to install the Enterprise Storage Manager software.

NOTE The example figures/illustrations provided in this section document are examples only.

3.1 Installation Modes

The Enterprise Storage Manager software can be installed in two modes: the Enterprise mode and Standalone mode.

3.1.1 Enterprise Mode (Management Host)

- Permits discovery of other managed hosts (the hosts that run the Enterprise Storage Manager software in a Standalone mode) in the same subnet.
- Does not permit itself to be discovered by any other managed hosts in the subnet.
- Permits itself to be discovered by other management hosts in the subnet based on the settings specified in the `kirk.conf` file.
- Permits you to add managed hosts in the user interface (UI).

NOTE The UI enables this functionality in the Enterprise mode.

3.1.2 Standalone Mode (Managed Host)

- Does not permit the discovery of other hosts that are running the Enterprise Storage Manager software.
- Permits the Management hosts (the hosts that run the Enterprise Storage Manager software in the Enterprise mode) in the same subnet to discover this host.
- Does not permit you to add managed hosts in the UI.

NOTE The UI disables this functionality in the Standalone mode.

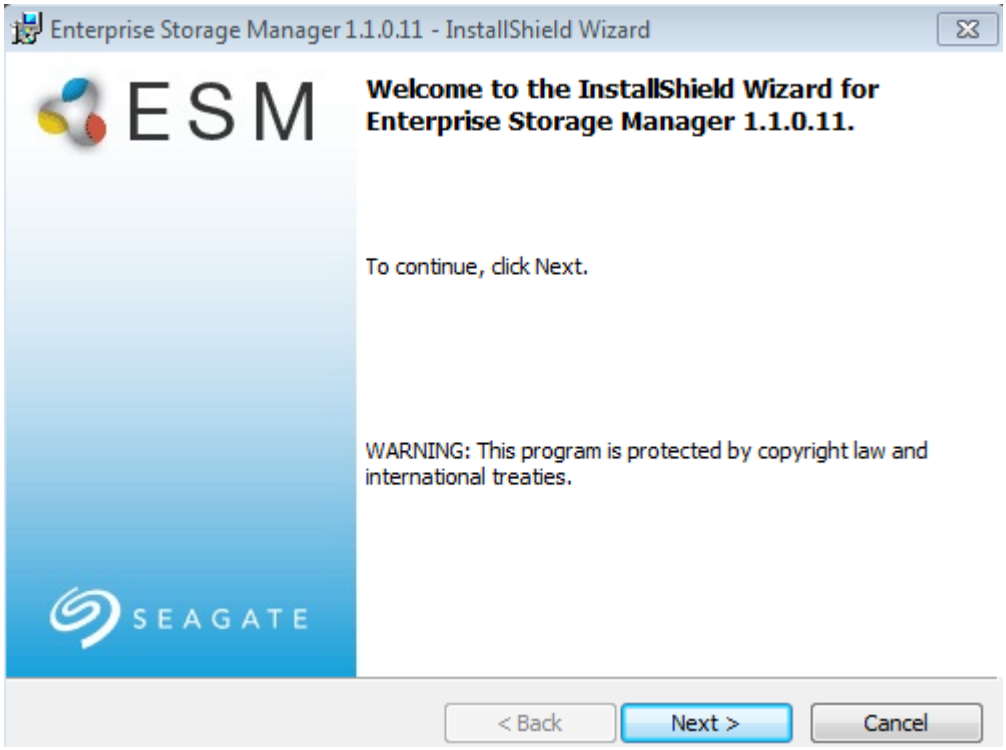
3.2 Installing the Enterprise Storage Manager Software on the Windows Operating System

To install the Enterprise Storage Manager software on a system running the Windows operating system, perform the following steps.

1. Double-click the `Enterprise Storage Manager.exe` file to start the installation.

   After the `Enterprise Storage Manager.msi` file is extracted, the **InstallShield Wizard for Enterprise Storage Manager** dialog appears.

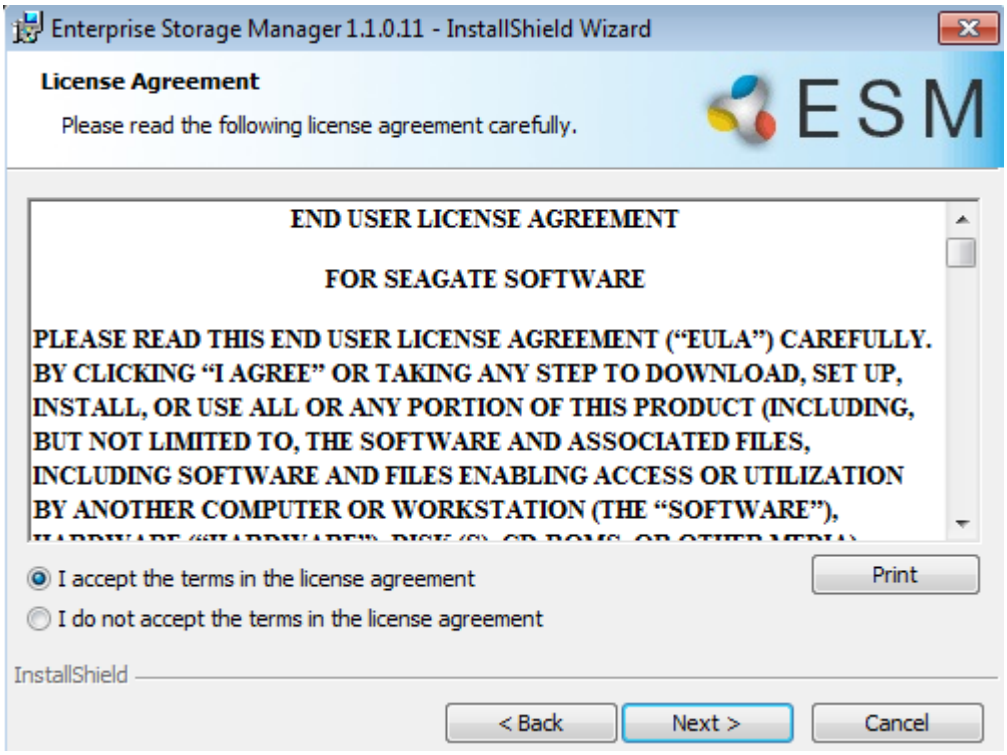
Figure 1 InstallShield Wizard for Enterprise Storage Manager



2. Click **Next**.

The **License Agreement** dialog appears.

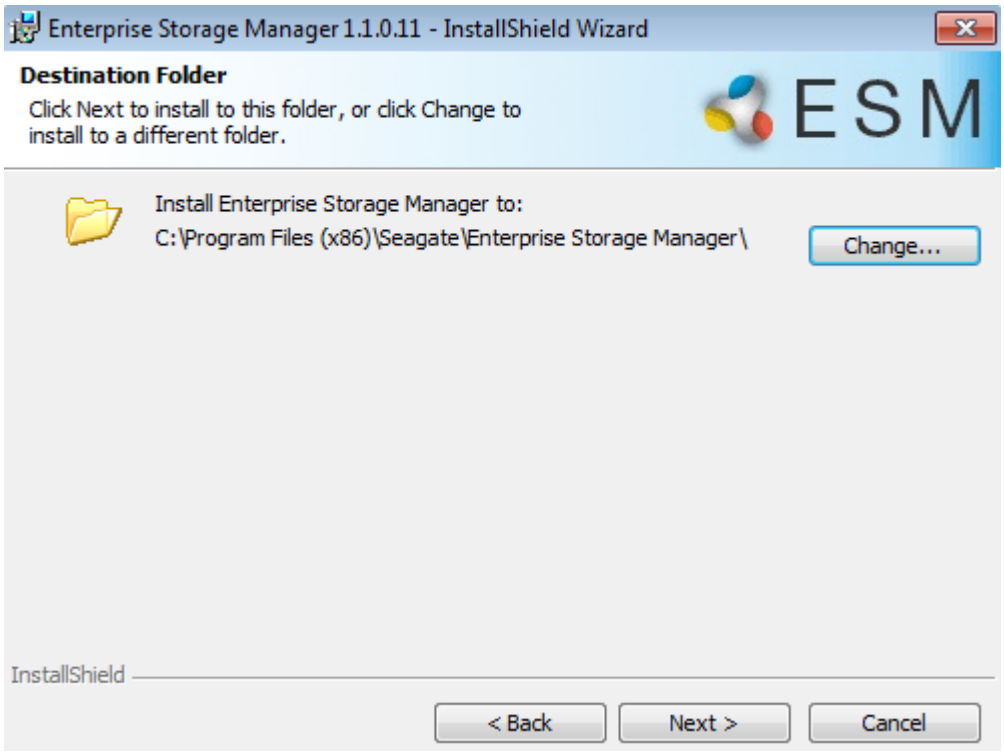
Figure 2 License Agreement



3. Read the license agreement, and select **I accept the terms in the license agreement** to accept the license agreement and continue with the installation.
4. Click **Next**.

The **Destination Folder** dialog appears.

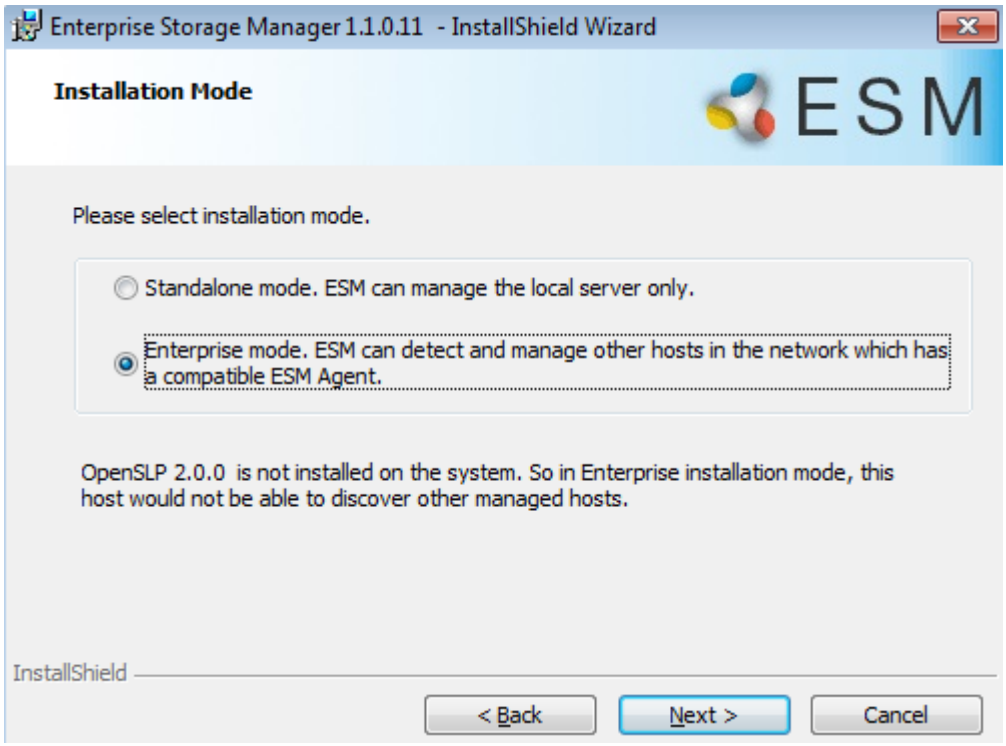
Figure 3 Destination Folder



5. The wizard provides a default destination folder for installation. You can either select the default destination folder or click **Change** to select a different folder location.
6. Click **Next**.

The **Installation Mode** dialog appears.

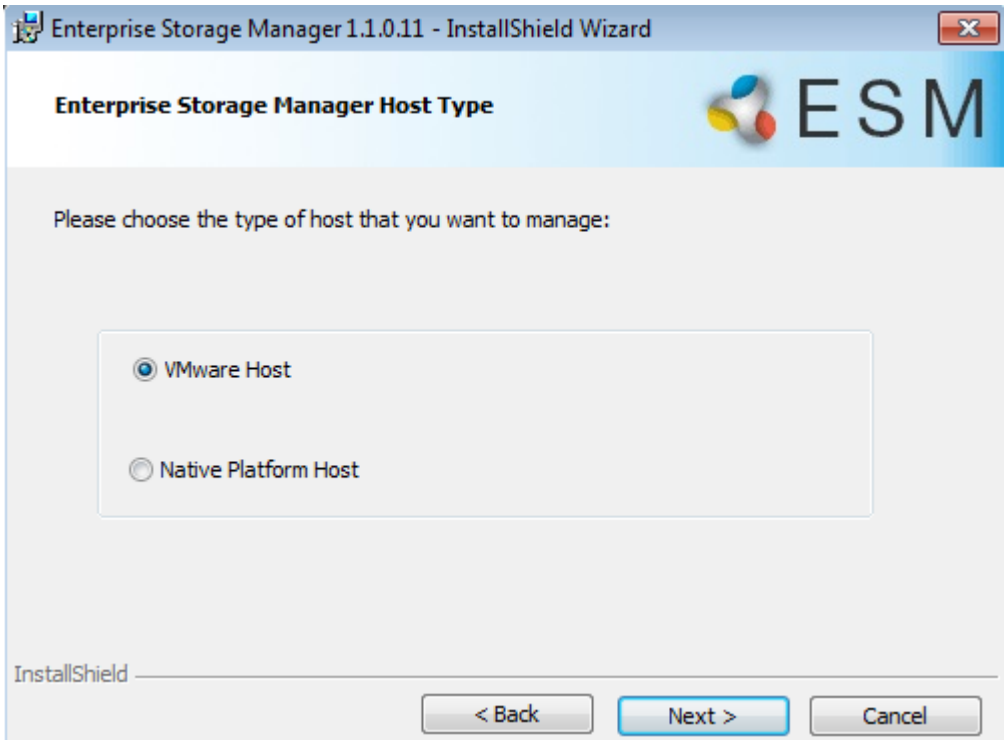
Figure 4 Installation Mode



7. Select either the **Standalone** or **Enterprise** mode of installation. For more information, see Section 3.1, Installation Modes.
8. Click **Next**.

The **Enterprise Storage Manager Host Type** dialog appears.

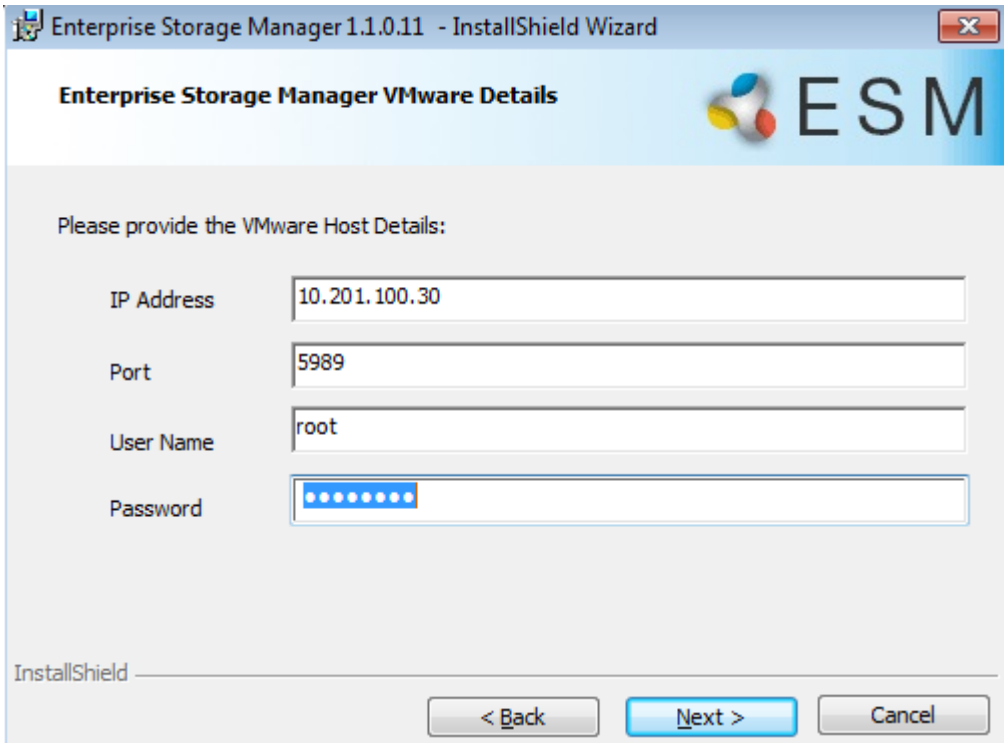
Figure 5 Enterprise Storage Manager Host Type



9. Select the host type.
   - If you select **Native Platform Host**, the **Enterprise Storage Manager Configuration** dialog appears. (For more information, see Figure 7). To continue with the installation, go to step **10**.
   - If you want to manage a VMware host, select **VMware Host**.

The **Enterprise Storage Manager VMware Details** dialog appears.

Figure 6 Enterprise Storage Manager VMware Configuration



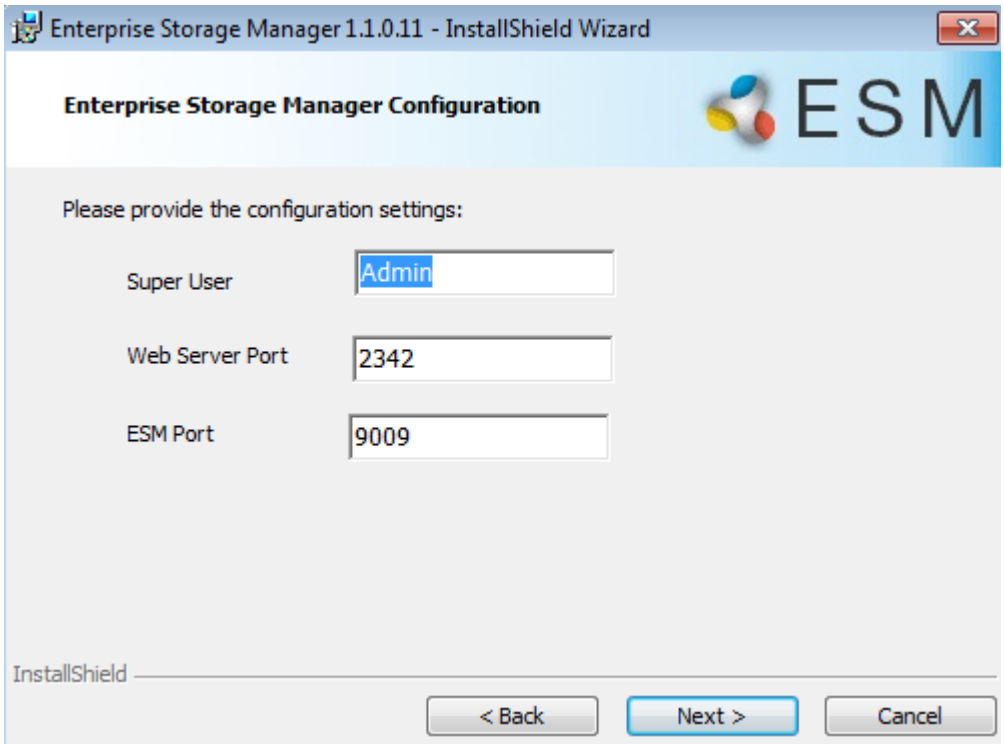
a. Enter the VMware host details in the **IP Address**, **Port**, **User Name**, and **Password** text boxes.

NOTE This port number refers to the port on which the CIMProvider listens to the messages. The default port number for ESXi is, 5989.

b. Click **Next**.

The **Enterprise Storage Manager Configuration** dialog appears.

Figure 7 Enterprise Storage Manager Native Platform Configuration



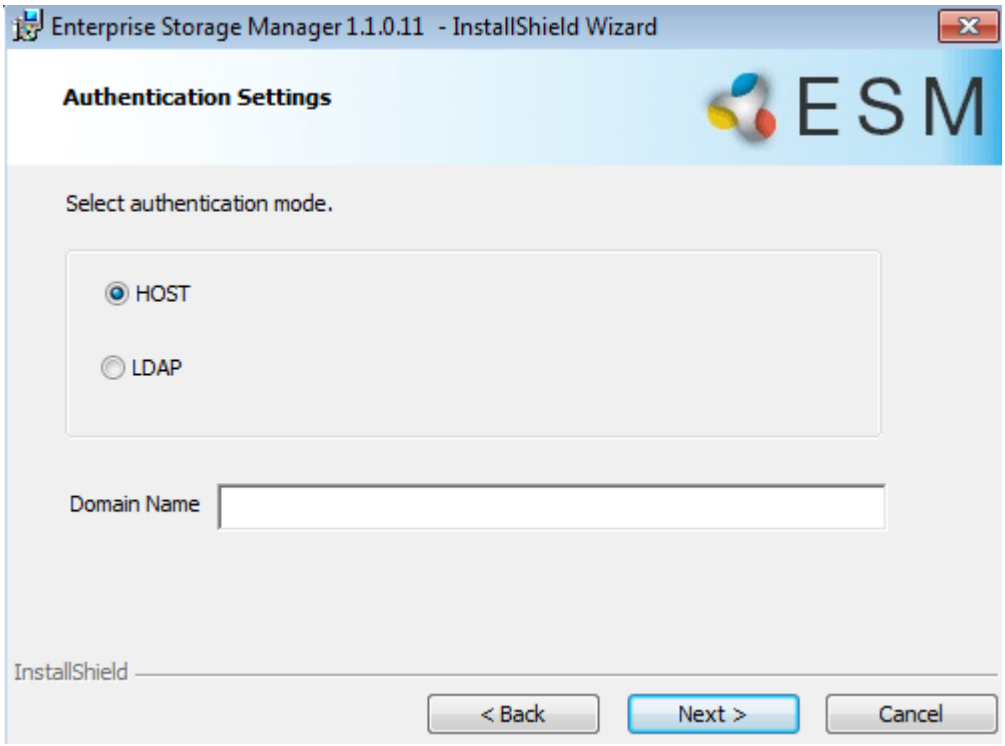
10. Enter the Enterprise Storage Manager configuration details in the **Super User**, **Web Server Port**, and **Enterprise Storage Manager software Port** text boxes.
    - **Super User** – The Super User discovers and adds hosts that run the Enterprise Storage Manager software for management by the other regular users. The Super User also sets up the email server details for email notifications.

NOTE For more information on the **Web Server Port** and the **Enterprise Storage Manager software Port**, see Section 6.1, Server Parameters.

11. Click **Next**.

The **Authentication Settings** dialog appears.

Figure 8 Authentication Settings



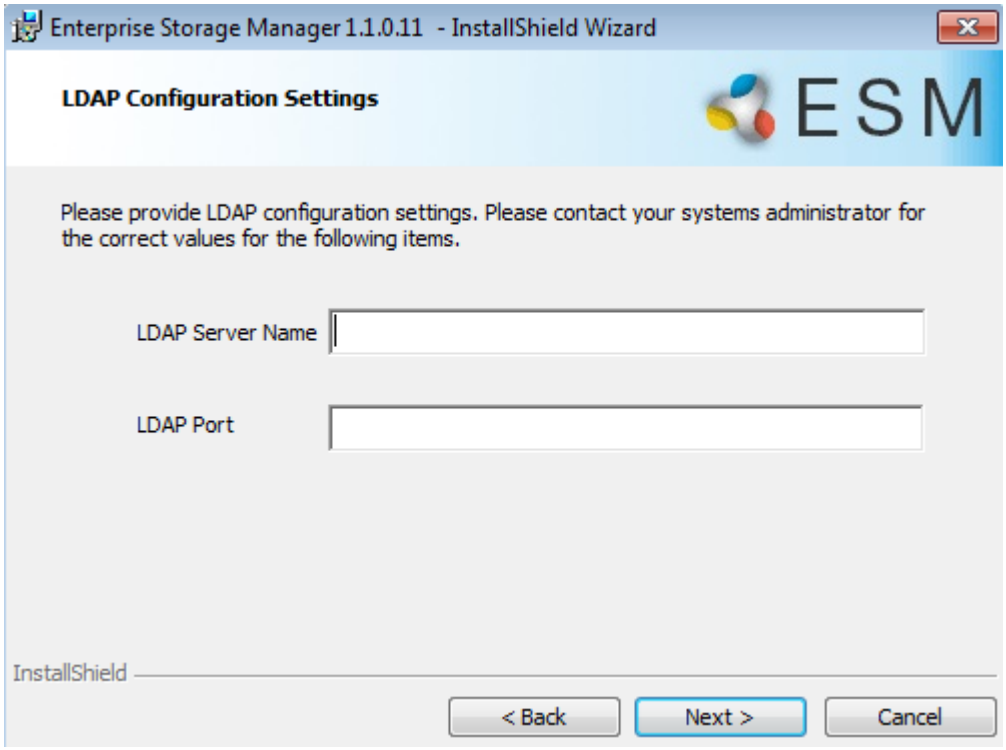
12. Select the authentication mode.

- Select **HOST** to authenticate your identity by using the host authentication.
- Select **LDAP** to authenticate your identity by using the LDAP server authentication.

NOTE The **Domain Name** text box must be filled for a domain user.

13. Click **Next**.
    - If you select HOST as the authentication mode, the **Ready to Install the Program** window appears (for more information, see Figure 10). To continue, go to step **14**.
    - If you select LDAP as the authentication mode, the **LDAP Configuration Settings** dialog appears.

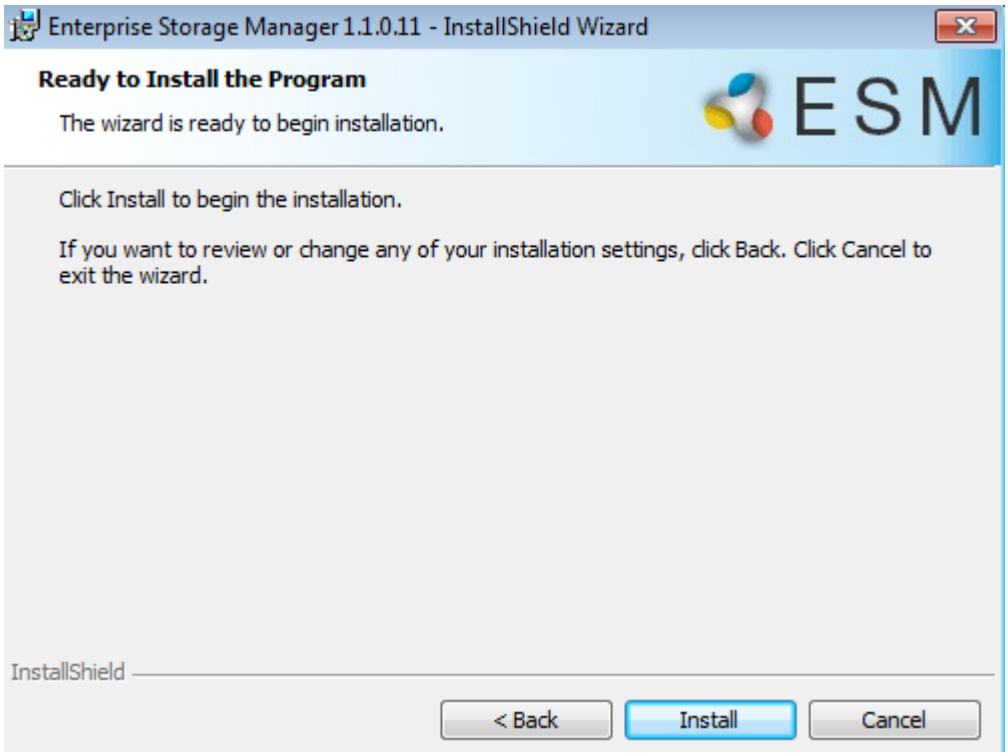
Figure 9 LDAP Configuration Settings



a. Enter the LDAP server name and LDAP port details.
b. Click **Next**.

The **Ready to Install the Program** dialog appears.

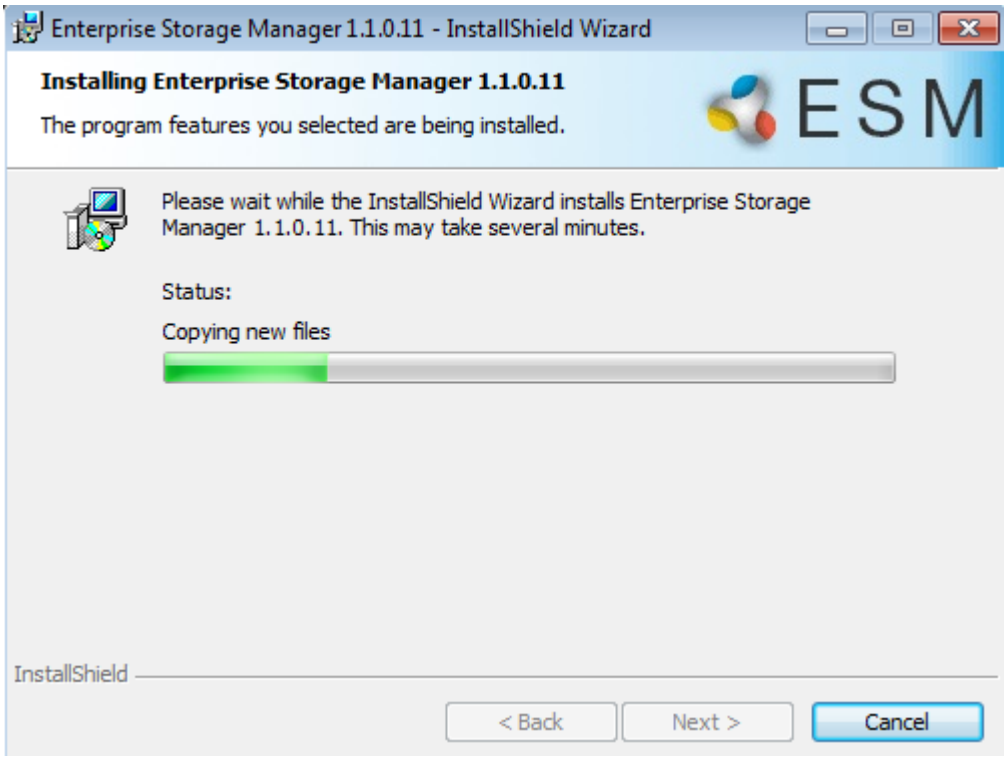
Figure 10 Ready to Install the Program



14. Click **Install**.

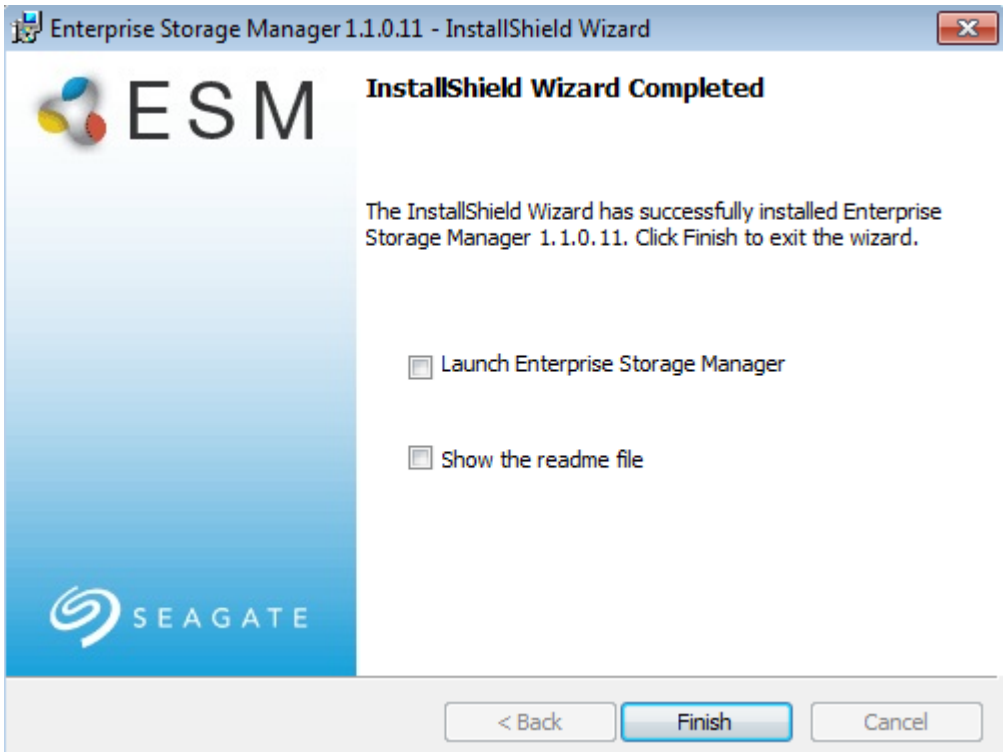
The **Installing Enterprise Storage Manager** dialog appears.

Figure 11 Installing Enterprise Storage Manager



After installation completes, the **InstallShield Wizard Completed** dialog appears.

Figure 12 InstallShield Wizard Completed



15. Select a launch option.
    - Select **Launch Enterprise Storage Manager** for the Enterprise Storage Manager software to start a browser that points to the Enterprise Storage Manager URL.

NOTE Make sure that you have the supported browsers to start the Enterprise Storage Manager software. For more information on the supported browsers, see Section 1, Hardware and Software Requirements.

- Select **Show the readme file** to start the Enterprise Storage Manager `readme` file.

3.3 Installing the Enterprise Storage Manager Software on the Linux Operating System

To install the Enterprise Storage Manager software on the Linux operating system, perform the following steps:

1. Start the Linux `bash` terminal.
2. Type the following command, and press **Enter**:

```
<Installer Path>./Enterprise Storage Manager
software-1.1.0-<Release_build>.<architecture>.bin -i
```

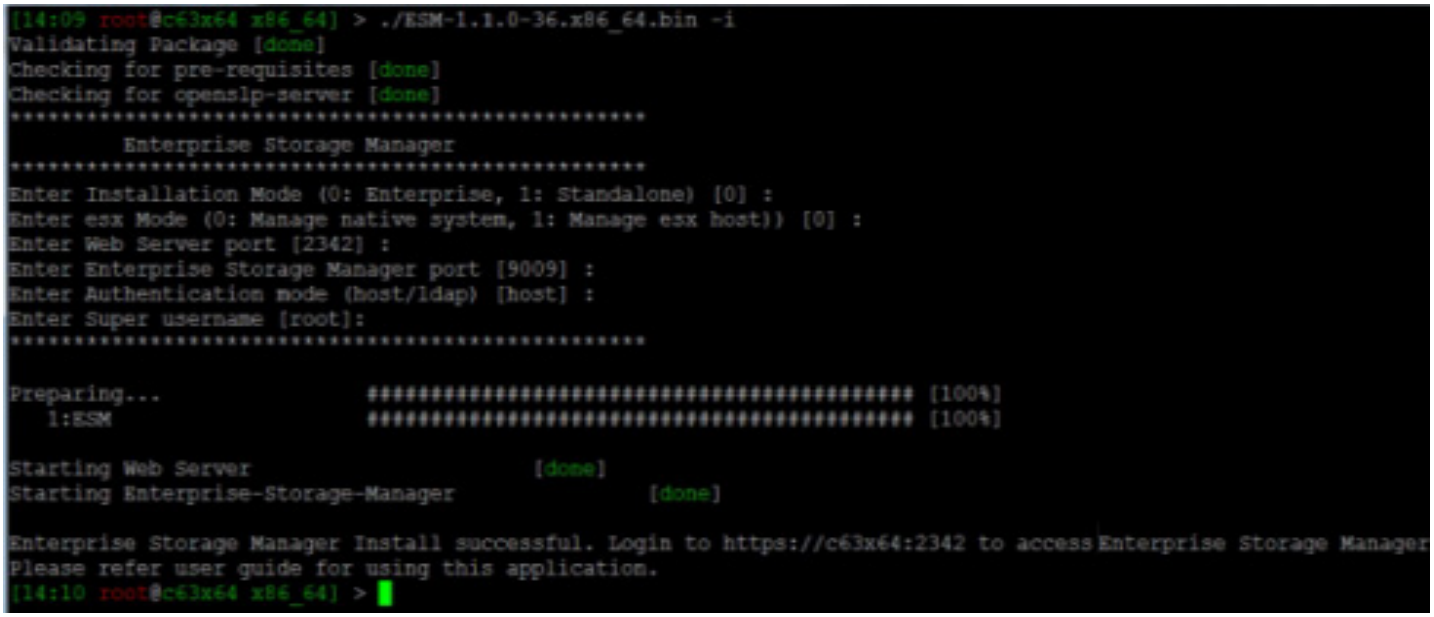
NOTE An angle bracket (**<>**) in this document specifies a value, if a value is required in the command or field.

3. You will be prompted to enter the ESX mode.
    - Enter **0** to manage the native platform hosts.
    - Enter **1** to manage a VMware host.

4. Provide the web server port number, Enterprise Storage Manager port number, and then the authentication mode, such as LDAP or Host.

NOTE When you run the `bin` file, the available list of options can be viewed without providing the command line parameters.

Figure 13 Installing Enterprise Storage Manager Software on the Linux Operating System



3.4 VMware Mode of Deployment

In VMware mode of deployment, the Enterprise Storage Manager is installed in a machine that does not have an ESXi server. Instead, during installation, the Enterprise Storage Manager application is coupled with an ESXi server.

During installation, the ESXi server details are obtained (IP address, user name, and password), and this information is used from the Management server to communicate with ESXi host. The following figure depicts the VMware mode of deployment.

Figure 14 VMware Mode of Deployment

Throughout the life cycle of the Enterprise Storage Manager server, this pairing of the Enterprise Storage Manager server and ESXi server is maintained. If the management host chooses to change management host (that is, the ESXi server); VMInfoUpdate utility is provided to change the details of ESXi host, that is, the IP address, user name, and password. Stop the Enterprise Storage Manager service, change the ESXi host details, and then start the service to manage a different ESXi server.

4 Uninstalling the Enterprise Storage Manager Software

The following sections describe the procedures that you must perform to uninstall the Enterprise Storage Manager software on the Windows and Linux operating systems.

4.1 Uninstalling the Enterprise Storage Manager Software on the Windows Operating System

To uninstall the Enterprise Storage Manager software on the Windows operating system, perform the following steps:

1. Select **Add/Remove Programs** from the **Control Panel**.
2. Select **Enterprise Storage Manager** from the list of the **Add/Remove Programs** dialog.
3. Click **Remove**.

During uninstallation, both the *NGINX* Service and the Enterprise Storage Manager software Service are stopped. The *NGINX* service and the Enterprise Storage Manager software service are uninstalled from the Service Control Manager (SCM) framework. The uninstallation process also removes the content from the Enterprise Storage Manager installation base directory.

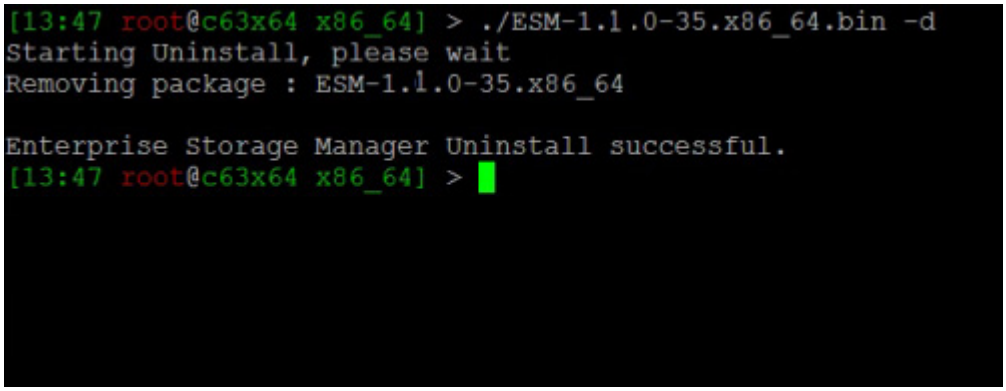
4.2 Uninstalling the Enterprise Storage Manager Software on the Linux Operating System

To uninstall the Enterprise Storage Manager software on the Linux operating system, perform the following steps:

1. Use the Linux `bash` terminal.
2. Type the following command, and press **Enter**.

   ```
   <Installer Path>./Enterprise Storage Manager
   software-1.1.0-<Release_build>.<architecture>.bin -d
   ```

Figure 15 Uninstalling Enterprise Storage Manager Software on Linux Operating System



During uninstallation, both the *NGINX* service and the Enterprise Storage Manager software Service are stopped and uninstalled. The uninstallation process also removes the content from the Enterprise Storage Manager installation base directory.

5 Web Server

The Enterprise Storage Manager software uses *NGINX* (included in the Enterprise Storage Manager installation package) as the web server. The *NGINX* web server is bundled with the Enterprise Storage Manager software installer. The *NGINX* executable file is located in the `<installation-base-dir>/server/sbin` folder, and the configuration files are in the `<installation-base-dir>/server/conf` folder.

NOTE An angle bracket (**<>**) specifies a value, if a value is required.

The Enterprise Storage Manager installation starts the *NGINX* web server and the Enterprise Storage Manager software as services. The installer performs the necessary configurations to provide for handshaking between the *NGINX* web server and the Enterprise Storage Manager Fast Common Gateway Interface (FCGI) application.

6 Configuration Settings

The following sections describe the Enterprise Storage Manager software configuration settings on the Windows and Linux operating systems.

6.1 Server Parameters

For server configuration, the following server parameters are required:

- `NGINX Port` – The port on which the NGINX web server (that is deployed with Enterprise Storage Manager software) listens to Enterprise Storage Manager web requests coming in from the browser.
- `Enterprise Storage Manager software Port` – The port used by the Enterprise Storage Manager FCGI application to communicate with the NGINX web server using the FCGI protocol.

The default value for the Enterprise Storage Manager software port is 9009 and the default value of the NGINX port is 2342.

NOTE If the ports are being used by other applications, you can modify the Enterprise Storage Manager software port and the *NGINX* port by modifying the `kirk.conf` file and the `nginx.conf` file, respectively.

For more information about modifying the Enterprise Storage Manager software and the *NGINX* ports, refer to **Appendix A** in the *Seagate Enterprise Storage Manager Software User Guide*.

6.2 Authentication Parameters

For authentication, you require the following server parameters:

- Authentication Mode (host/LDAP)
- Host Domain
- LDAP Host Name (applicable only in LDAP authentication)
- LDAP Port (applicable only in LDAP authentication)
- LDAP Domain Name (applicable only in LDAP authentication)
- Super User Name

The installer UI/installer script collects the information and saves it in the `kirk.conf` file. The user validation does not happen at the installation because the installer does not collect the user name and password during installation. The `Super User` parameter requires the user name of the user who has the administrative privileges.

You can configure any one of the user accounts as a super user, which assigns special privileges to the account that includes configuring managed hosts, setting up email/SMTP configurations, and configuring alert notifications.

Refer to the operating system documentation for instructions on how to modify the user-account settings.

6.3 SSL Certificate

An SSL certificate, TLS Version 1, is created by the installer and stored in the `<Installer_Root>/server/conf` folder to provide a secure SSL channel between the web server and the browser.

7 Enterprise Storage Manager Software Service

The following sections describe the behavior of the Enterprise Storage Manager software service on the Windows and Linux operating systems.

7.1 Windows Operating System

On the Windows operating system, the installer uses the SCM framework to install and run the Enterprise Storage Manager software as a service. After the installation, the Enterprise Storage Manager software service can be managed from the SCM. When uninstalling the Enterprise Storage Manager software, the installer stops the service and uninstalls the service from the SCM.

If the Enterprise Storage Manager URL stops working or if you have difficulty using the application, perform the following steps to restart the *NGINX* Service and the Enterprise Storage Manager software service.

1. Go to **Control Panel > Administrative Tools > Services**.

   Or

   Go to **Start > Run**, enter services.msc to open Windows Service Control Manager.
2. Stop or start the Enterprise Storage Manager software service.
3. Stop or start the *NGINX* service.

7.2 Linux Operating System

On the Linux operating system, the installer updates the `/etc/init.d/` folder to add the *ESMSvc service*. Use the *ESMSvc service* to run the Enterprise Storage Manager and *NGINX* applications as daemons.

- To start the ESM service, type `ESMSvc start` at the Linux command prompt.
- To stop the ESM service, type `ESMSvc stop` at the Linux command prompt.
- To view the status of the ESM service, type `ESMSvc status` at the Linux command prompt.

8 Enterprise Storage Manager Log Configuration on the Windows and Linux Operating Systems

The installer creates the `kirk.cfg` and `kirk.txt` files and updates the `kirk.cfg` file with log level as `ERROR`. The log file is created in the `<Install-base-directory>/logs` folder. The log levels are modified by editing the `kirk.cfg` file.

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